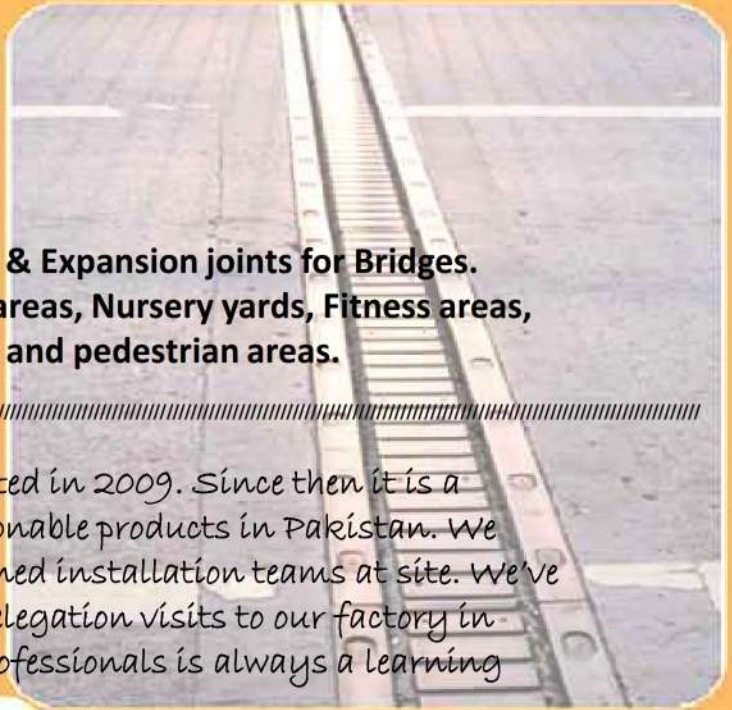




**Elastomeric Bearing pads & Expansion joints for Bridges.  
Rubber Tiles for Playground areas, Nursery yards, Fitness areas,  
Public buildings and pedestrian areas.**



“Our business visit to Pakistan started in 2009. Since then it is a successful story and we’ve sold reasonable products in Pakistan. We visited Pakistan five times and trained installation teams at site. We’ve arranged more than 20 Pakistani delegation visits to our factory in Madrid. Working with Pakistani professionals is always a learning experience as following”

1. Bearing pads bulging rectification after applying leveling epoxy at bottom and upper surface of the Bearings.
2. Technique of bearing pads replacement.
3. Expansion joint installation techniques which are used in Pakistan.

We are looking forward best business relation with Pakistan.



*Nauria Dominguez Perpina*  
16-03-2021

**Nauria Dominguez Perpina**  
**General Manager.**  
**Interbuna S.L. Spain**

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## Laminated Elastomeric Bearings

Laminated Elastomeric Bearing pads allow:

- Simultaneous movement in two directions.
- Simultaneous turns in three different axes.
- Absorption of vertical loads.
- Absorption of short horizontal loads.



The manufacturing process of INTERBUNA S.L. Elastomeric bearings undergo periodical testing. Interbuna S.L. works under the European Standard EN-1137-3, test are done on finished bearings in order to assure a real control of the process.

Interbuna,S.L. is certified with ISO-9001/2008 standard con el n° :0710043018-TM and ASQPE.



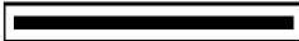
Interbuna S.L. can manufacture elastomeric bearing according to: BS5400, AASHTO, SETRA, UNI-1001B, DIN 4141, EN-1337, or any other requested by clients. Laminated elastomeric bearings can be manufactured in two qualities: 100% Natural Rubber or only in Chloroprene / Neoprene rubber internal steel plates remain totally Zinc coated, avoiding the rusting process.



Bearings are placed over a clean, dry and horizontal place. For in-situ construction, the bearing level should be protected by applying grout or self leveling epoxy.

### STANDARD TYPES OF LAMINATED ELASTOMERIC BEARING

#### A -TYPE-ONE STEEL PLATE REINFORCED BEARINGS:



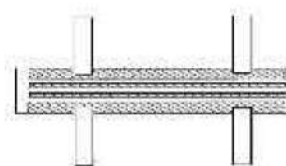
#### B- TYPE-REINFORCED BEARING:

Bearings manufactured with elastomeric layers and high resistance steel plates joint by a careful vulcanization process. They can absorb vertical loads according to the design and can perform movements and turns in all directions.



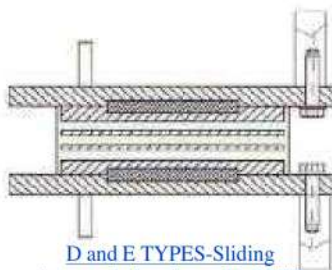
#### C- TYPE-Reinforced and Anchored Bearings (C2 and C4):

**C2 Type:** Laminated Elastomeric bearing with their upper and lower sides anchored to the structure. This is to avoid displacement of the bearing and the structure.



#### C4 Type

Similar to C2 but with external metallic plates.



#### D and E TYPES-Sliding elastomeric bearings with PTFE:

D type Bearings are Laminated elastomeric bearing with PTFE vulcanized and E type bearings have PTFE located in steel box recessed. Its dimension is determined according to the movements.



#### F- type-Elastomeric bearings without reinforcement:

Only manufactured with elastomer the admissible working load goes from 1.5 to 5 N/mm<sup>2</sup>.



### CHLOROPRENE RUBBER(CR) EN-1337-3 STANDARD/ NHA STANDARDS

TESTS	UNITS	SPECIFICATION	STANDARD
HARDNESS	ShA	60±5	UNES313 0
TESNILE STRENGTH	N/mm2	≥16	UNES351 0
ELONGATION AT BREAK	%	≥425	UNES351 0
NR-OZONE RESISTANCE 25pphm 30% 96h a 40°C +/-2°C		No crack	53558/1
CR-OZONE RESISTANCE 100pphm 30% 96h a 40°C +/-2°C		No crack	53558/1
CR			
COMPRESSION SET (24h at 70°C)	%	≤15	UNE53 511
TEAR STRENGTH	N/mm	≥10	UNE53 516
THERMAL AGEING NR(168h at 70°C) CR(72h at 100°C)	HARDNESS V	ShA	5
	TENSILE STRENGTH V	N/mm2	±15
	ELONGATION AT BREAK V	%	+25

### STEEL S235 JR SJN EN-10025-2-2006

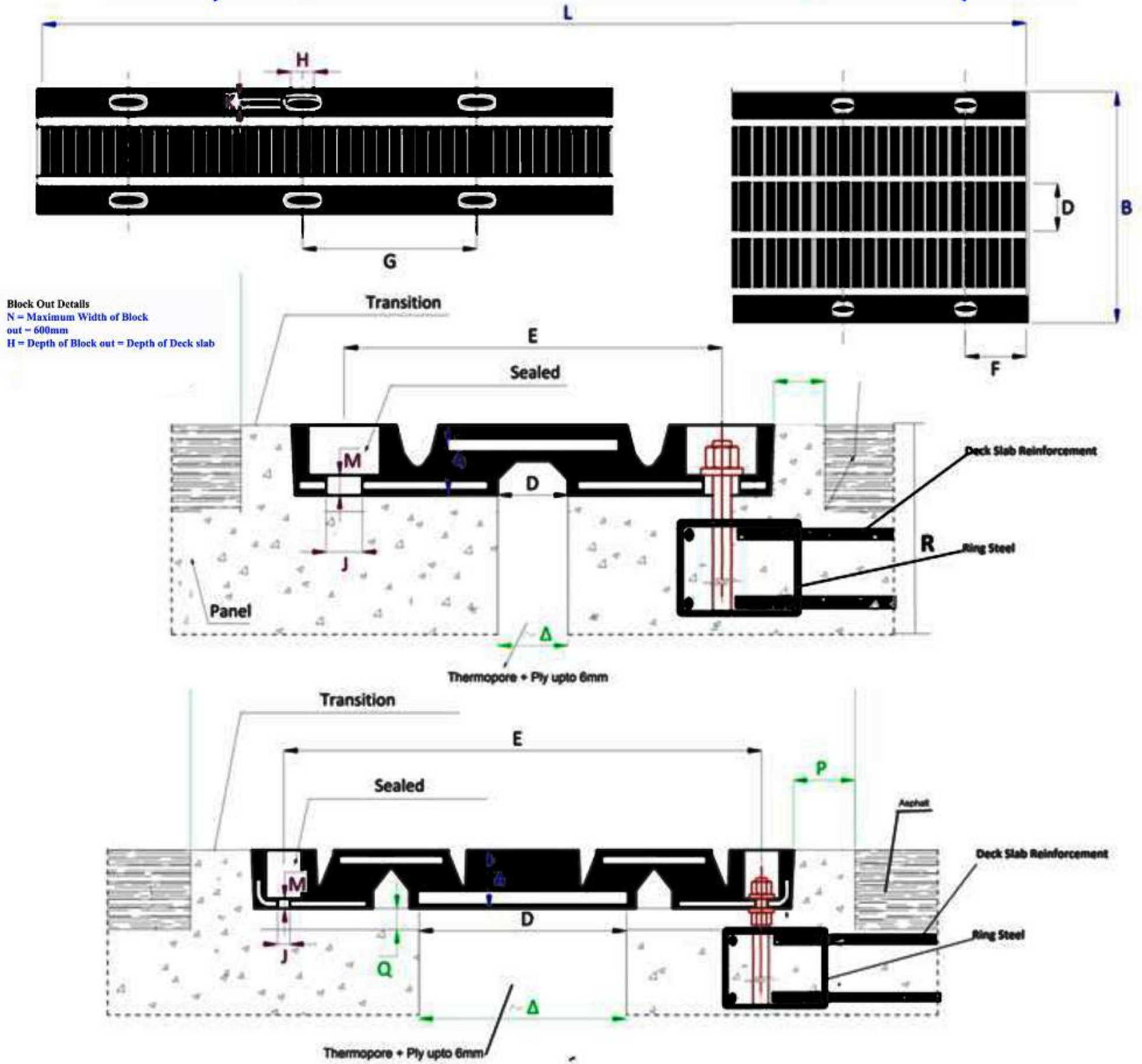
TESTS	UNITS	SPECIFICATION	STANDARD
Yield Strength	N/mm2	≥235	UNE 36080
Tensile Strength	N/mm2	≥26	UNE 36080
Elongation	%	340-470	UNE 36080

### VIRGIN PTFE EN-1337-2 STANDARD

TESTS	UNITS	SPECIFICATION	STANDARD
Tensile Strength	N/mm2	20-30	UNE 53510

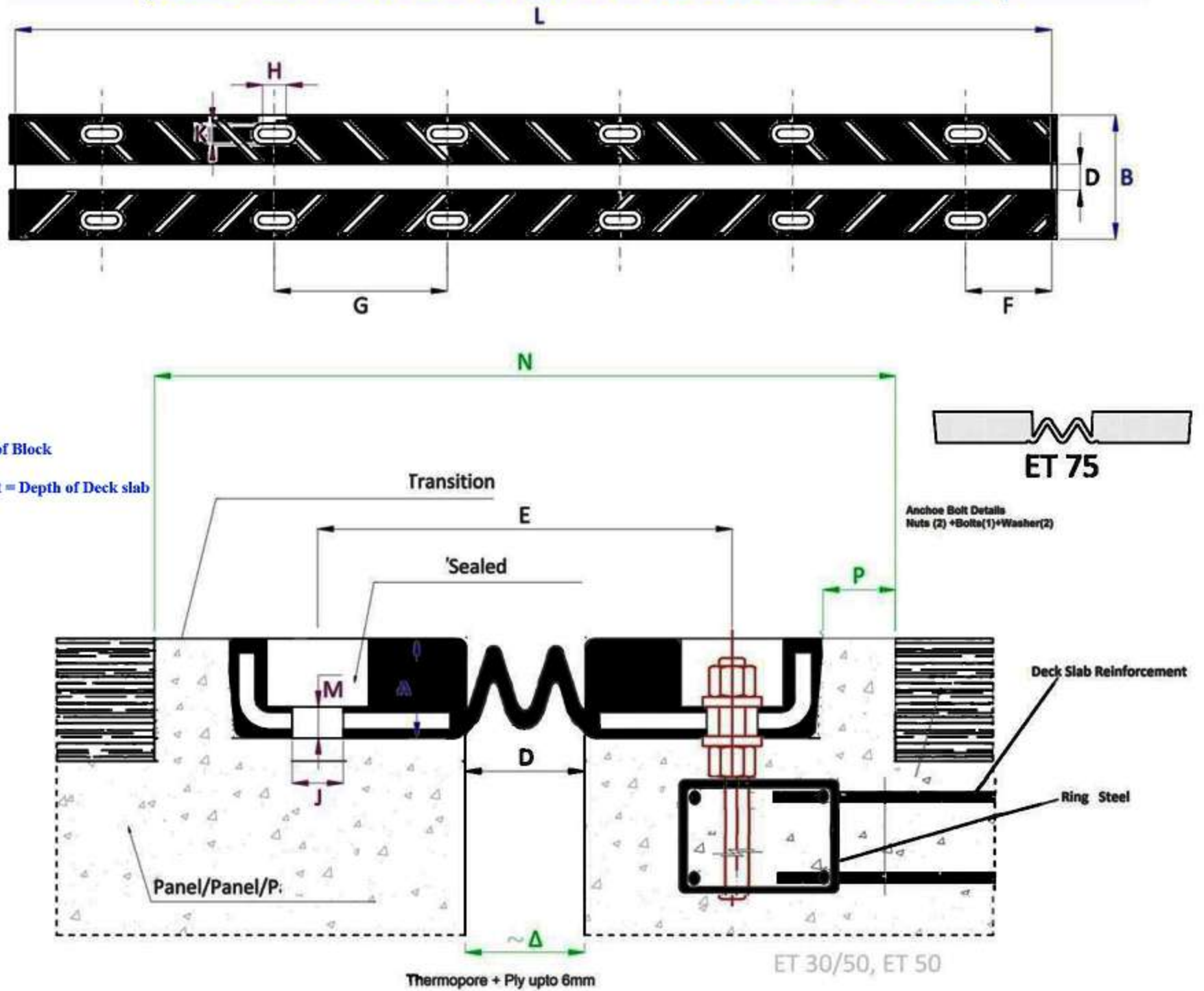


**MULTIFLEX – TRANSFLEX REJ TYPE EXPANSION JOINT  
(MEDIUME MOVEMENT FROM ± 22 TO ± 165)**



MODEL	MOVEMENT (mm)	WEIGHT (kg)	DIMENSIONS (mm)										
			*A	B	L	D	E	F	G	H	J	K	M
42	±22	33	35	240	2000	35	188	165	334	36	15	36	6
52	±26	37	40	270	1829	50	220	152	305	40	18	40	8
70	±35	62	45	356	1829	70	280	152	305	40	15	40	10
80	±40	85	54	432	1829	86	342	152	305	57	22	57	8
100	±50	145	55	580	1829	240	494	152	305	50	20	50	11
160	±80	248	76	720	1829	316	612	152	305	56	24	55	14
230	±115	311	97	900	1829	376	794	152	305	60	28	60	13
330	±165	403	129	1208	1829	520	1080	152	305	70	32	70	15.5

**MONOCELL – TRANSFLEX ET TYPE EXPANSION JOINT  
(MEDIUME MOVEMENT FROM ± 20 TO ± 37)**

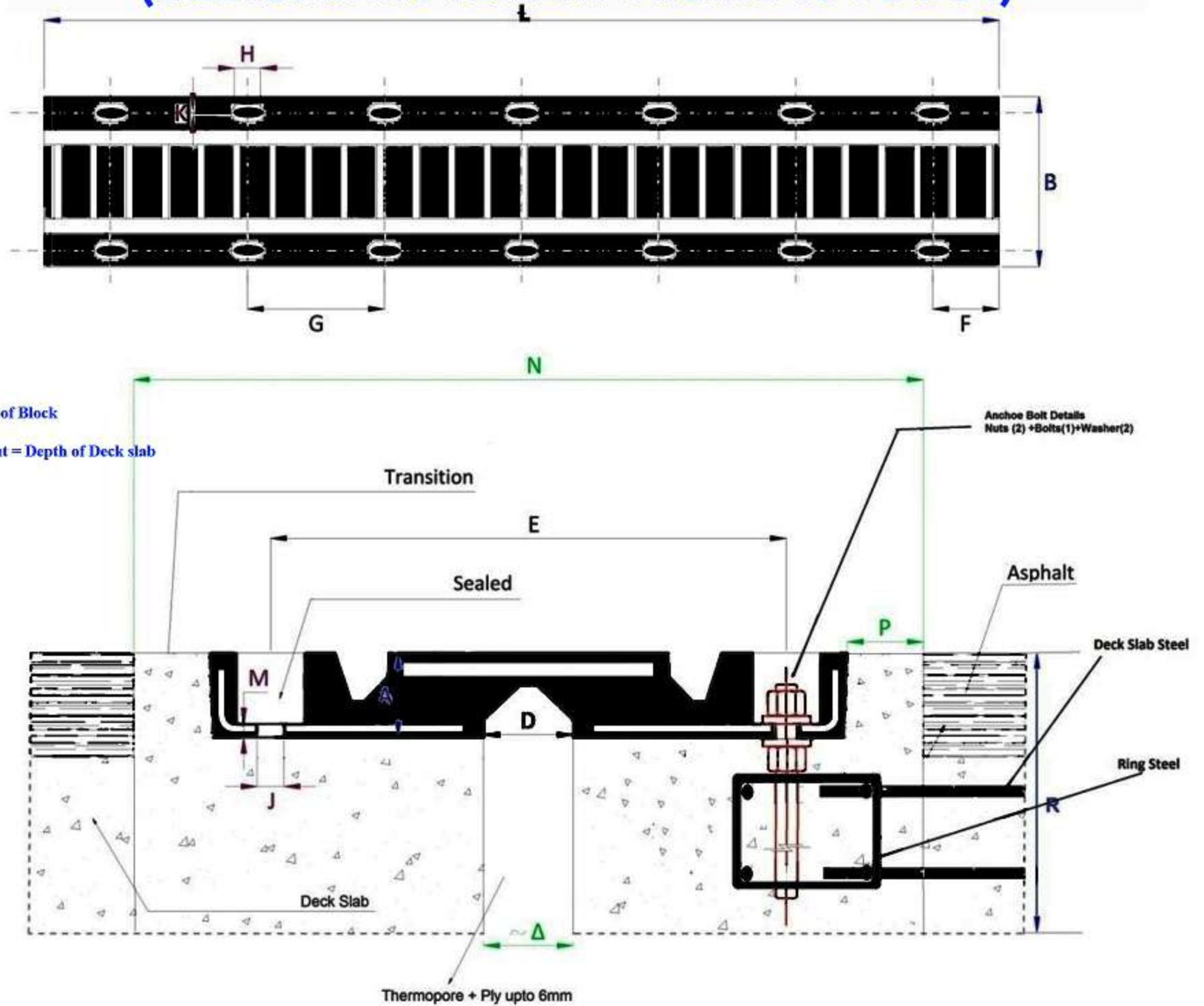


MODEL	MOVEMENT (mm)	WEIGHT (kg)	DIMENSIONS (mm)										
			*A	B	L	D	E	F	G	H	J	K	M
30/50	±20	16.5	30	205	2010	50	140	165	334	36	20	40	7
50	±20	21.5	35	210	1752	42	146	146	292	44	18	55	11
75	±37	28	35	290	2000	77	200	280	288	38	15	55	6,5

MODEL	Cutting width (N)	Transition width (F)	Levelling height (Q)	GAP (Δ)	Anchors		
					Quantity	Metric x leng. (mm)	Torque (Nm)
30/50	355	70	50	40	12	M-14 x 200	70
50	340	70	50	42	12	M-14 X 200	70
75	420	70	50	55	12	M-14 X 200	70

the thickness of the transition coincides with the height A

**MULTIFLEX – TRANSFLEX EJM TYPE EXPANSION JOINT  
(MEDIUME MOVEMENT FROM ± 40 TO ± 80)**



Block Out Details  
 N = Maximum Width of Block out = 600mm  
 H = Depth of Block out = Depth of Deck slab

MODEL	MOVEMENT (mm)	WEIGHT (kg)	DIMENSIONS (mm)										
			*A	B	L	D	E	F	G	H	J	K	M
80	±40	61,5	47	356	2000	50	288	288	287	55	17	37	7,5
100	±50	76,5	54	405	2000	70	318	318	287	55	19	47	8.5
140	±70	121,0	71	490	2000	90	402	402	287	55	19	47	8.5
160	±80	151,5	82	520	2000	100	432	139	287	55	19	47	8.5

MODEL	Cutting width (N)	Transition width (F)	Levelling height (Q)	GAP (Δ)	Anchors		
					Quantity	Metric x leng. (mm)	Torque (Nm)
80	500	70	70	42	14	M-16 x 200	90
100	560	80	80	50	14	M-18 X 200	120
140	640	80	90	70	14	M-18 X 200	120
160	670	80	100	80	14	M-18 x 200	120

\*Nota: the thickness of the transition coincides with the height A

# EXPANSION JOINT FOR BRIDGES



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Pakistan**

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